IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application of:	Docket No.30307A
KNOLL, JOAN et al.	
Serial No. :09/854,867	Group Art Unit No. 1634
Filed: May 14, 2001	
SINGLE COPY GENOMIC HYBRIDIZATION PROBES AND METHOD OF GENERATING SAME	Examiner: C. Myers

Commissioner of Patents
Alexandria, VA 22313-1450

Sir:

PETITION TO THE COMMISSIONER
UNDER 37 CFR § 1.84(a)(2) TO ACCEPT PHOTOGRAPHS

Applicant hereby petitions the Commissioner of Patents and Trademarks, under 37 CFR § 1.84(a)(2) to accept these photographs into the above-referenced application. Enclosed herewith are three (3) sets of photographs to be entered into the above-referenced application; along with one set of black and white copies that accurately depicts, to the extent possible, the subject matter shown in the color drawings. A check in the amount of $130.00 in accordance with § 1.17 (h). Applicant requests favorable consideration of this petition

Any additional fees which are due in connection with this Petition should be applied against our Deposit Account No. 19-0522.

Respectfully submitted,

By _____
Tracey S. Truitt, Reg. No. 43,205
HOVEY WILLIAMS LLP
2405 Grand Boulevard, Suite 400
Kansas City, Missouri 64108
816/474-9050

ATTORNEYS FOR APPLICANT(S)

12/30/2004 AWONDAF1 00000126 09854867
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Fig. 1

Fig. 2

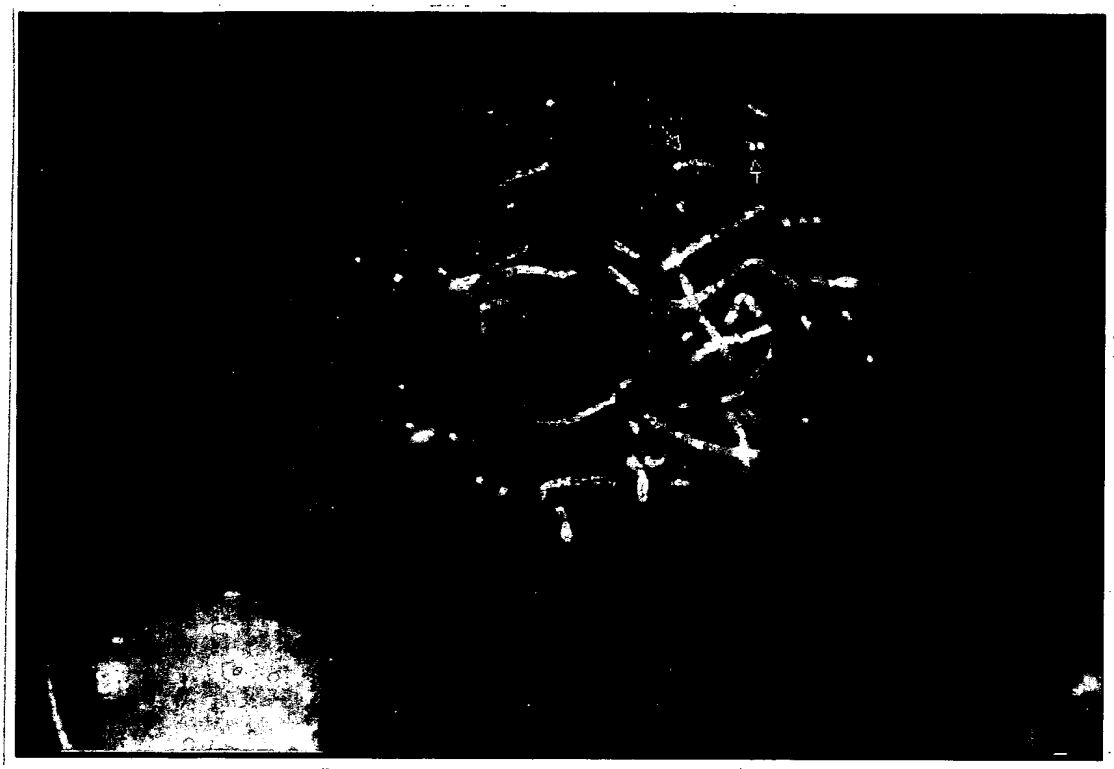

Fig. 3

Fig. 4

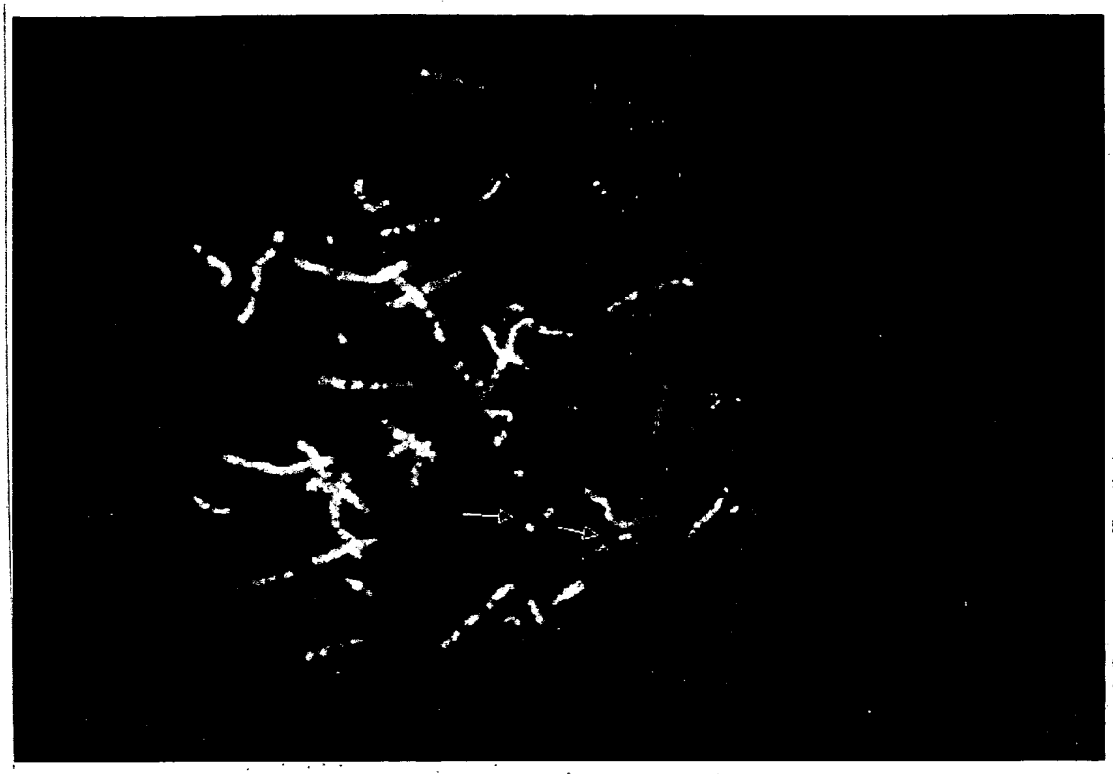

Fig. 5

Fig. 6

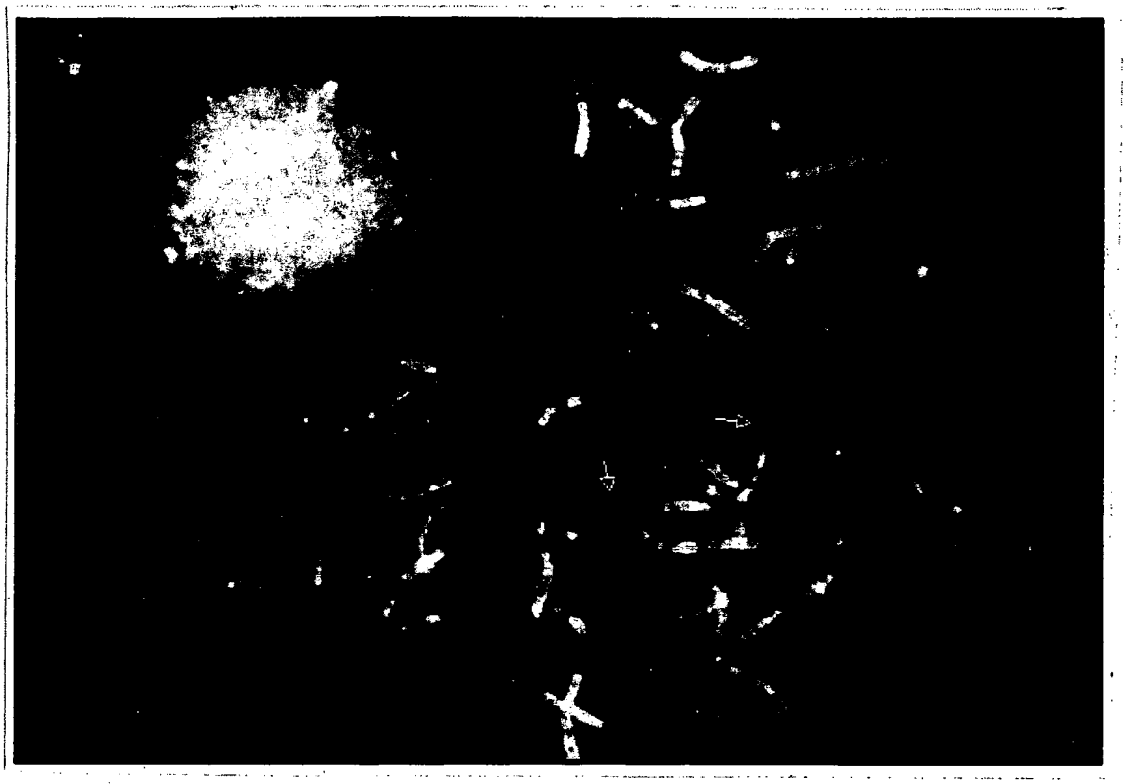

Fig. 7

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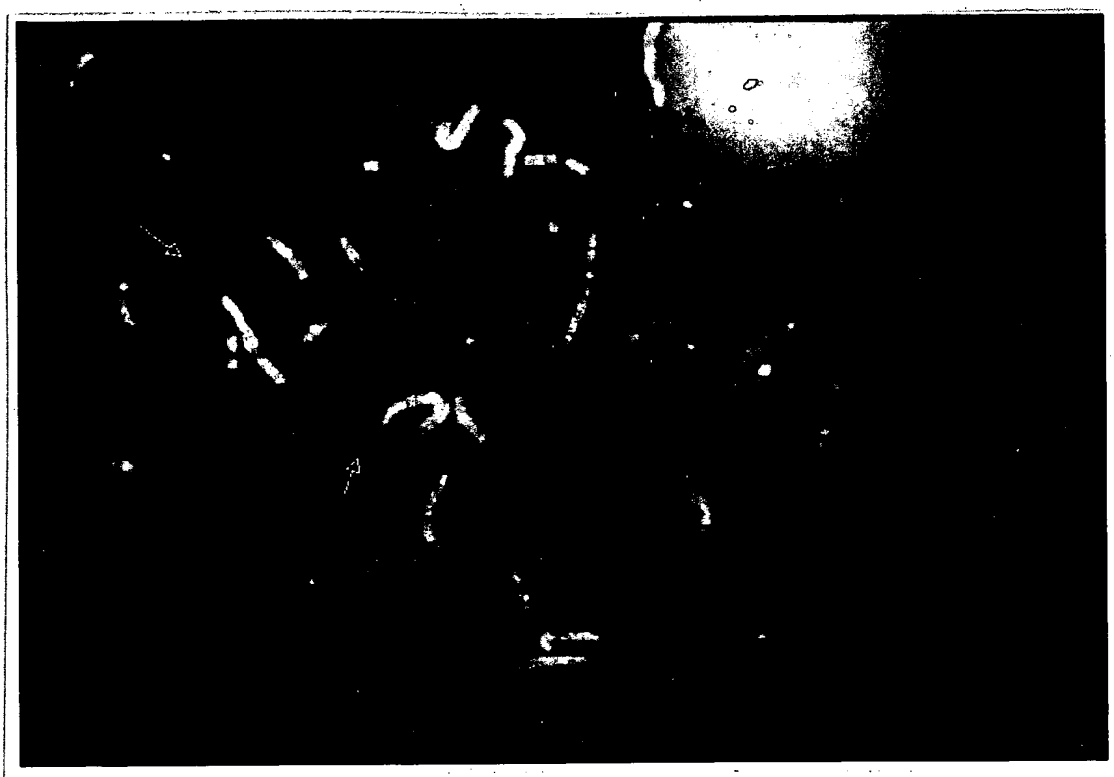

Fig. 9

Fig. 10

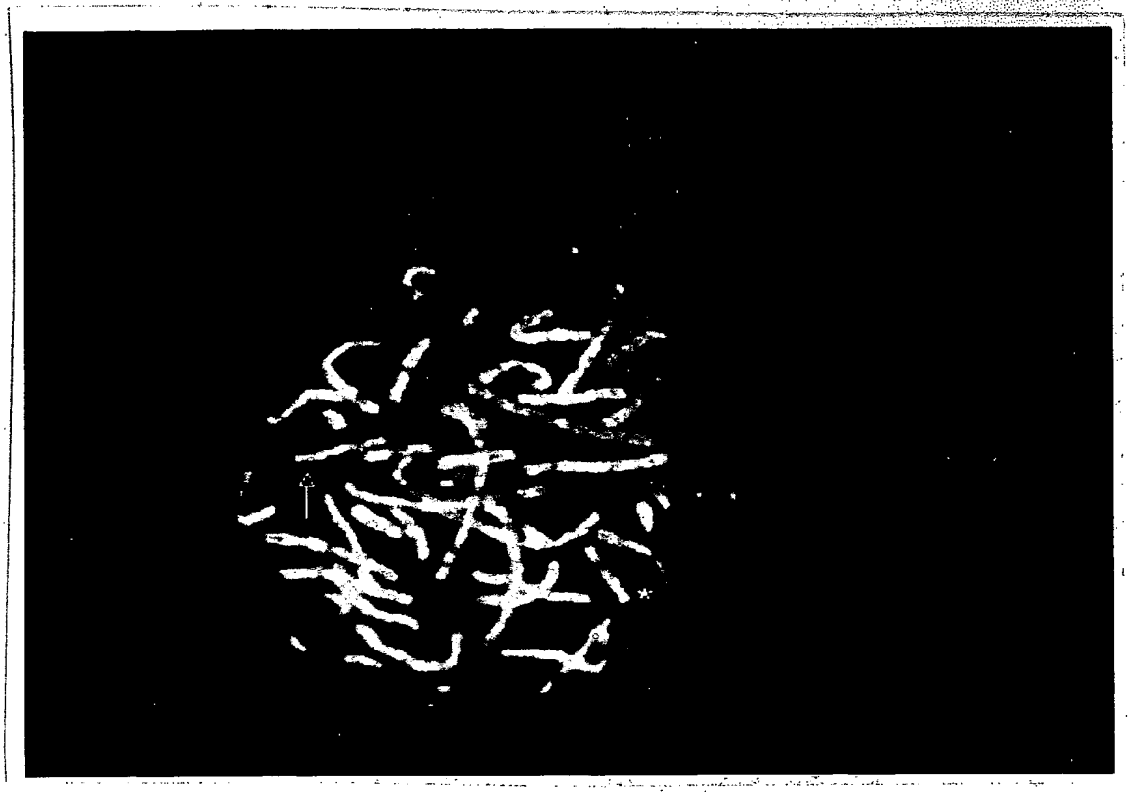

Fig. 11

Fig. 12

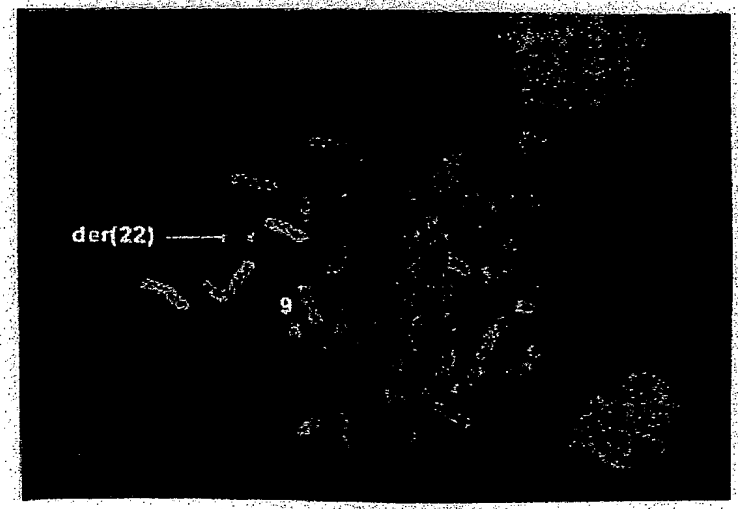

Fig. 15

Fig. 16

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PETER K. ROGAN, Ph.D.
Laboratory of Human Molecular Genetics
Department of Medical Research
Children's Mercy Hospital and Clinics
2401 Gillham Rd.
Kansas City, MO 64108
Tel: (816) 960-4820
Fax: (816) 753-1307
E-mail: progan@cmh.edu
WWW: http://www.sce.umkc.edu/~roganp/

EDUCATION

1979	B.A.	Biophysics	Johns Hopkins University
1980	D.E.A.	Cellular Biology	Universitè de Grenoble, France
1983	M.Phil.	Molecular Biophysics and Biochemistry	Yale University
1987	Ph.D.	Molecular Biophysics and Biochemistry (Human Genetics)	Yale University (Advisor: S. M. Weissman, M.D.)

WORK EXPERIENCE AND POSTGRADUATE TRAINING

1979 - 1980	Research Assistant, Biophysics Laboratory	Institut Laue-Langevin Grenoble, France
1984 - 1986	Consultant, Computational Molecular Biology	Dept. Human Genetics, Yale University School of Medicine
1987 - 1990	Postdoctoral Fellow, Laboratory of Eukaryotic Gene Expression	ABL/Basic Research Program National Cancer Institute, NIH
1990 - 1996	Assistant Professor, Dept. Pediatrics, Div. Genetics	College of Medicine, The Pennsylvania State University
1993	Participant, Genetic Linkage Analysis Course (Director, J. Ott)	College of Physicians and Surgeons, Columbia University
1995 - present	President	Phylogenetix Laboratories, Inc.
1996 - 1999	Associate Professor, Human Genetics	MCP Hahnemann School of Medicine
1999 - 2004	Associate Professor, Pediatrics	School of Medicine, University of Missouri-Kansas City
2001 - 2004	Associate Professor, Computer Science	School of Interdisciplinary Computing and Engineering, University of Missouri-Kansas City
2002- present	Adjunct Associate Professor	Department of Chemistry, University of Kansas
2004 - present	Professor, Pediatrics and Computer Science	Schools of Medicine and Computer Science & Engineering, University of Missouri-Kansas City

HONORS, AWARDS AND PROFESSIONAL RECOGNITION

Bourse d'Etudes (Government of France), 1979-1980
National Research Service Predoctoral Award, 1980-1984
Postdoctoral Fellowship Award, ABL-Basic Research Program, 1987-1988

Scientific Conference Coordinator: Prader-Willi Syndrome Association (National), 1992
Basil O'Conner Starter Scholar, March of Dimes, 1992-1993
Shannon Award, National Institutes of Health, 1992-1993
Elected to Human Genome Organization, 1992
Director, March of Dimes-Central PA Molecular Diagnostic Laboratory, 1993-1996
March of Dimes Birth Defects Foundation Community Service Award, 1994
Honors, Pennsylvania Society of Professional Engineers -Harrisburg chapter, 1996
Who's Who in the East, 1997
Translational Research Award, Children's Cancer Group, 1999
Professorship in Pediatric Molecular Genetics, Children's Mercy Hospital, UMKC School of Medicine, 1999
External Advisory Board; Pharmacogenetics of Anticancer Agents (PharmGKB network, NIGMS PHS), 8/2003-.

PROFESSIONAL AFFILIATIONS
Sigma XI, 1987- ; American Association for the Advancement of Science, 1984- ; American Society of Human Genetics, 1990- ; American Association for Cancer Research, 1996- ; Human Genome Organization, 1992- ; Mutation Database Association 1997-; International Society for Computational Biology 2003-

GRANTS REVIEWED
Louis B. Leakey Foundation, US; National Science Foundation, US; Action Research Charity, Great Britain; National Heart Lung and Blood Institute, NIH; University of Kansas, Department of Pharmaceutical Chemistry Training Grant, PHS 9/1999; University of Missouri Research Board, 3/2003; Kansas City Area Life Sciences Institute 8/2003.

MANUSCRIPTS REVIEWED
Nucleic Acids Research; Genomics; The American Journal of Medical Genetics; American Journal of Human Genetics; Journal of Medical Genetics; Clinical Genetics; Cytogenetics and Cell Genetics; Journal of Clinical Endocrinology and Metabolism; Acta Pediatrica; Journal of the American Medical Association; Journal of Pediatric Hematology and Oncology; Human Genetics

INVENTIONS AND PATENTS
Invention Disclosure 91-1088 (PSU); Detection of Active Genomic Transcription Templates by Synthetic Methylation in Vivo; Disclosure Date: 10/18/91; Status: Disclosed 11/91

Invention Disclosure 92-1151 (PSU); Human Genetic Mapping with Recombinant Disomic Chromosomes; Disclosure Date 6/15/92; Status: Disclosed 11/13/92 - Presented to American Society of Human Genetics

Invention Disclosure 93- 1226 (PSU) [1]Method for rapid identification of prokaryotic and eukaryotic organisms; US Patent # 5,849,492.

Invention Disclosure 94- 1339 (PSU); A Method to Define the Chromosomal Location of Disease Genes that Cause Recessive Congenital Disorders; Disclosure Date: 4/18/94

Invention Disclosure 94- 1440 (PSU/NIH); Computational analysis of nucleic acid information defines binding sites; Status: US Patent # 5,867,402, licensed 3/98

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[1]Rights to this invention have been acquired by Phylogenetix Laboratories, Inc.

Invention Disclosure 95- 1466 (PSU); 15qllql3 End Clones for Diagnostic Testing of Chromosome Rearrangements and Mutations; Disclosure Date: 4/26/95; Status: Disclosed 10/21/94

Invention Disclosure 95- 1551 (PSU); General Method of Detection of Minimal Residual Disease on Relapse after Non-Autologous Bone Marrow Transplant in Leukemia Patients; Disclosure Date: 12/15/95

Invention Disclosure 97- 0296 (Allegheny General Hospital); Information theory-based analysis of splice junction mutations in hereditary non-polyposis colon cancer; Disclosure Date: 8/1/97; Status: Disclosed 10/24/97

Invention Disclosure 00-0001 (Children's Mercy Hospital); Selection and generation of single-copy genomic probes for hybridization; Disclosure Date: 3/24/00; Status: Patent application Ser. No. 09/573,080, filed 5/16/00; Allowed 8/13/03; US Patent # 6,828,097 (12/7/04); Continuation application, filed 2/18/04.

Invention Disclosure 01-0001 (Children's Mercy Hospital); Single copy probes and method of generating same (Continuation-in-part); Disclosure Date: 4/7/00; Status: US Patent App. Ser. No. 09/854,867, filed 5/14/01; PCT/US01/15674.

Invention Disclosure 01-0002 (Children's Mercy Hospital); Subtelomeric DNA probes and method of producing same; Disclosure Date: 9-15-02; Status: US Patent App. Ser. No. 60/415,345, filed 9/30/02. Improved Sub-telomeric DNA Probes and Method of Producing Same, filed 07/2/03. Subtelomeric DNA probes and method of producing same, PCT\US03\31170, WO 2004/029283 A2, US Patent App. Ser # 10\676,248, filed 9/30/03.

Invention Disclosure 01-0004 (Children's Mercy Hospital); Computational selection of probes for localizing chromosome breakpoints in genetic diseases and cancer; Disclosure Date: 4/15/04; Status: US Patent App. Ser #60/557,007, filed 3/26/04.

APPROVED CLINICAL PROTOCOLS

Study Chair, B957: Genetic Etiology of Acute Leukemia in Children with Down Syndrome, Children's Oncology Group.

Study Committee, C297101: Therapy for Children with Down syndrome and acute leukemia, Children's Oncology Group.

PUBLICATIONS (in chronological order)

1. Wilson SR, Corvan PJ, Seiders RP, Hodgson DJ, Brookhart M, Hatfield WE, Miller JS, Reiss AH, Rogan PK, Gebert E, Epstein AJ : « The Structure and Magnetic and Electrical Conductivity Properties of the Charge Transfer Compound 1,1-Dimethylferrocenium Bis(tetracyanoquinodimethane), $(CH_3C_5H_3)_2Fe(TCNQ)_2$" in *Molecular Metals*, ed. W.H. Hatfield, Plenum Press, p 407-414ff, 1979.

2. Rogan PK, Williams GJB: The structure of the dihydrofolate reductase inhibitor 2,4,6-triamino-5-chloroquinazoline. Acta Cryst *B36*:2358-2362, 1980.

3. Rogan PK, Zaccai G: Hydration in purple membrane as a function of relative humidity. J Mol Biol *145*:281-284, 1981.

4. Mottez E, Rogan PK, Manuelidis LM: Conservation of the 5' region of the long interspersed mouse L1 repeat: Implications of comparative sequence analysis. Nucl Acids Res *14*:3119-3135, 1986.

5. Rogan PK: Restriction mapping by preferential ligation of adjacent digestion fragments. Nucl Acids Res *14*:9219, 1986.

6. Rogan PK: A study of a major long interspersed DNA repeat family common to rodents and primates. Ph.D. dissertation. Yale University, 1987.

7. Rogan PK, Pan J, Weissman SM: A complete L1 repeat element in the human ε-$^{G}\gamma$ globin gene intergenic region: Sequence analysis and concerted evolution within this family. Mol Biol Evol *4*:327-343, 1987.

8. Rogan PK, Salvo JJ: Molecular genetics of pre-Columbian South American Mummies. In: Molecular Evolution. UCLA Symposium on Molecular and Cellular Biology, *122*:223-234, 1990.

9. Rogan PK, Salvo JJ: Study of nucleic acids isolated from ancient remains. Yearbook Phys Anthropol *33*:195-214, 1990.

10. Rogan PK, Higgins DR: Screening UV-sensitive mutants with the Stratalinker® UV crosslinker. Strategies *4*:53-54, 1990.

11. Rogan PK: Research report: Ancient DNA studies. Soc. Arch. Sci. Bull. *14*:26-27, 1991.

12. Lemkin PF, Rogan PK: Automatic detection of noisy spots in two-dimensional Southern blots. Appl and Theor Electrophor *2*:141-149, 1991.

13. Rogan PK, Lemkin PL, Klar AJS, Singh J. Strathern JN: Two-dimensional agarose gel electrophoresis of restriction-digested genomic DNA. Methods: A Companion to Methods in Enzymology *3(2)*: 91-97, 1991.

14. Mascari MJ, Gottlieb W. Rogan PK, Butler MG, Waller DA, Armour JAL, Jeffreys AJ, Ladda RL, Nicholls RD: The frequency of uniparental disomy in Prader-Willi syndrome. New Eng J Med *326*:1599-1607, 1992.

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* Co-principal authors

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61. Rogan PK, Cazcarro PM, Knoll JHM: Sequence-based design of single copy genomic DNA probes for fluorescence *in situ* hybridization, Genome Research, 11: 1086-1094, 2001.

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BOOK CHAPTERS, LETTERS AND CONFERENCE REPORTS

1. Nicholls RD, Gottlieb W. Mascari MJ, Rinchik EM, Pai GS, Driscoll DJ, Butler MG, Zori RT, Neumann PE, Waters MF, Zackowski JL, Horsthemke B. Rogan PK, Ladda RL, Williams CA: Molecular Analysis in Angelman Syndrome, Prader-Willi Syndrome and Potential Mouse Models. In: NATO Advanced Research Workshop on Prader-Willi Syndrome and Other Chromosome 15q Deletion Disorders. S.B. Cassidy (ed). Springer-Verlag, Berlin, 1992.

2. Rogan PK, Salvo JJ: High fidelity amplification of ribosomal gene sequences from mummified South American human remains. In: Ancient DNA, B. Herrmann (ed). Springer-Verlag, New York, pp. 182-194, 1993.

3. Rogan PK, Salvo JJ: High fidelity polymerase chain reaction amplification products from mummified South American human remains. In: Proceedings of the First World Congress on Mummy Studies, C Rodriguez-Martin (ed). Museo Archeologia y Etnografica: Tenerife, 1995.

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124. VK. Nalla and PK Rogan. Automated Information Theory-Based Mutation Analysis: Application to mRNA splicing. Human Genome Variation Society, October 2004.

Joan H.M. Knoll, Ph.D., FACMG, FCCMG
Children's Mercy Hospital and Clinics
2401 Gillham Road
Kansas City, MO 64108
Tel: (816) 983-6509
Fax: (816) 983-6515
E-mail: jknoll@cmh.edu

Education:

1979 B.Sc. (Biology, Genetics) 1979, University of Western Ontario
1982 M.Sc. (Genetics) 1982, University of Saskatchewan, Saskatoon
1987 Ph.D. (Human Genetics) 1987, University of Manitoba

Postdoctoral Training:

Research and Clinical Genetics Laboratory Fellowship:

1987-90 Research Fellow in Medicine (Genetics), Children's Hospital, Boston
1987-90 Fellow in Pediatrics, Harvard Medical School

Certification:

1990 Board Certified in Clinical Cytogenetics, American Board of Medical Genetics
1992 Board Certified in Clinical Cytogenetics, Canadian College of Medical Genetics
1992 Fellow, Canadian College of Medical Genetics
1992 Founding Fellow in American College of Medical Genetics
1996 Board Certified in Clinical Molecular Genetics, American College of Medical Genetics

Academic Appointments:

1990 Instructor in Pediatrics, Harvard Medical School
1991 Instructor in Pathology, Harvard Medical School
1992-99 Assistant Professor in Pathology, Harvard Medical School
1999- Associate Professor in Medicine/Pediatrics, UMKC School of Medicine

Hospital and Other Appointments:

1990-99 Research Associate in Medicine (Genetics), Children's Hospital, Boston
1990-91 Consultant, Integrated Genetics, Framingham, MA
1991-98 Co-director, Clinical Cytogenetics Service, Beth Israel Deaconess Medical Center, Boston
1998-99 Director, Clinical Cytogenetics Service, Beth Israel Deaconess Medical Center, Boston
1999- Director, Clinical Cytogenetics Service, Children's Mercy Hospital, Kansas City
1999- Director, Human Genetics Research Laboratory, Children's Mercy Hospital, Kansas City
1999- Professorship in Pediatric Cytogenetics, Children's Mercy Hospital, Kansas City

Committee Assignments:

National and Regional:

1991-1995 Scientific Advisor, Angelman Syndrome Foundation
1992- Scientific Advisor, Canadian Angelman Syndrome Society
1994- Scientific Advisor, Scientific Advisor, Inverted Duplication 15 Education and Advocacy Group
1994- Member, Technology Transfer Subcommittee for diagnostic testing of Angelman and Prader-Willi syndromes, American College of Medical Genetics
1996- Co-organizer of Third International Chromosome 15 Workshop in Vancouver, BC, October 1996
1999- Member, UM Columbia/Children's Mercy Hospital Genetics Fellowship Joint Training Program

2001 Judge, Fellows, Residents & Students Research Presentations, Children's Mercy Hospital's Research Days, June 2001

2002-03 Advising Member, Johnson County Community College Biotechnology Steering Committee, Overland Park, KS

2003- Member, Basic Sciences Research Committee, Children's Mercy Hospitals, Kansas City

Memberships and Committee Assignments in Professional Societies:

1986- American Society of Human Genetics

1989- Reviewer for Genetics journals (American Journal of Human Genetics, American Journal of Medical Genetics, Cancer Genetics and Cytogenetics, Cytogenetics and Cell Genetics, Genomics, Human Molecular Genetics, New England Journal of Medicine)

1991-97 Member, Board of Directors, Angelman Syndrome Foundation

1992- Fellow in Canadian College of Medical Genetics

1992- Canadian Angelman Syndrome Society

1993- Founding Fellow in American College of Medical Genetics

1993- Member, Prenatal Diagnosis Committee of New England Regional Genetics Group

1993-99 Cytogenetics Faculty Organizer and Member, Harvard Training Fellowship Program in Genetics

1994- Member, Inverted Duplication 15 Education and Advocacy Group

1999-2004 National Committee for Clinical Laboratory Standards subcommittee advisor on Fluorescence In Situ Hybridization for Medical Genetics for FISH Validation (Report issued 2004)

2000, 2001 Laboratory Inspector, College of American Pathologists

2001- Active Member, American Cancer Research Association

Major Research Interests:

1. Chromatin/chromosomal structure
2. Genetic imprinting of chromosome 15q11q13 in Angelman syndrome, Prader-Willi syndrome, and duplication syndromes
3. Phenotype/genotype relationships in human genetic disorders
4. Molecular mechanisms causing chromosomal rearrangements
5. Bioinformatics and development of new DNA technologies for detection of human genetic disorders

Principal Clinical and Hospital Service Responsibilities:

1991-1999 Scientific Director, Clinical Cytogenetics Service, Beth Israel Hospital, Boston

1999- Director, Clinical Cytogenetics, Children's Mercy Hospital, Kansas City, MO

Teaching:

1992-99 Genetics Laboratory Tutorials: Demonstrator, first year Harvard medical students

1992-99 Cytogenetics lectures, Beth Israel Hospital: Lecturer, first through fourth year Pathology residents

1992-99 Cytogenetics Laboratory Rotations: Director of service, students, second year Pathology residents and Genetics Fellows in Harvard Training Program in Genetics, ~5 per year at one month each

1993-99 Cytogenetic and molecular genetics lectures for fellows in Harvard Training Program in Genetics

1996, 1997 Prenatal Diagnosis Lecture to students in HMS/MIT Reproductive Biology program

1999- Management of Continuing Medical Education Lectures at Children's Mercy Hospitals

2001- Clinical Cytogenetics, UMKC Medical Students (3rd Year)

2001- Mentor/Molecular Biology and Cytogenetics Instructor to two Ph.D. Candidates from Kansas University's Department of Chemistry

Advising Responsibilities:

1994	Medical student in research laboratory (Nina Livingston).
1992-1993	Postdoctoral fellow in research laboratory. (Dr. Sou-De Chang who is currently head of Department of Anatomy. Chang Gung University, College of Medicine, Taipei Taiwan).
1993-99	Research technicians (Lisa White, Heather Baker).
1991-99	Clinical technologists (Alena Leff, Min Zhang, Amy Tillman, Shoshana York, JoAnn Rosol-Donoghue, Camille Marsh Scott).
1992-99	Clinical pathology residents rotating through the clinical laboratory
1992-99	Faculty, Harvard Genetics Training program
1995-97	Medical graduate student in research laboratory (Dr. Christine Mundlos).
1996-98	Clinical genetics fellow in research laboratory (Dr. Gabriella Repetto who is now director of clinical genetics services in University Catolica de Chile, Santiago, Chile).
1999-	16 clinical laboratory technical staff, 2 office assistants (minimal turnover in last 5 years).
1999-	2 research laboratory technical staff (Patrick Angell, Mauricio Miralles; previous: Angela Marion, Patricia Walters, Patricia Cazcarro, Brad Dalton), 0.5 office assistant (Ann Lowenstein; previous: Amy Wolfe).

Patents/Patent Applications:

Invention Disclosure 00-0001 (Children's Mercy Hospital); Selection and generation of single-copy genomic probes for hybridization; Disclosure Date: 3/24/00; Status: Patent application Ser. No. 09/573,080, filed 5/16/00; Allowed 8/13/03; Continuation application, filed 2/18/04. Patent #6,828,097 issued 12/08/04.

Invention Disclosure 01-0001 (Children's Mercy Hospital); Single copy probes and method of generating same (Continuation-in-part); Disclosure Date: 4/7/00; Status: US Patent App. Ser. No. 09/854,867, filed 5/14/01; PCT/US01/15674.

Invention Disclosure 01-0002 (Children's Mercy Hospital); Subtelomeric DNA probes and method of producing same; Disclosure Date: 9-15-02; Status: US Patent App. Ser. No. 60/415,345, filed 9/30/02. Improved Sub-telomeric DNA Probes and Method of Producing Same, filed 07/2/03. Subtelomeric DNA probes and method of producing same, PCT\US03\31170, WO 2004/029283 A2, US Patent App. Ser # 10\676,248, filed 9/30/03.

Invention Disclosure 01-0004 (Children's Mercy Hospital); Computational selection of probes for localizing chromosome breakpoints in genetic diseases and cancer; Disclosure Date: 4/15/04; Status: US Patent App. Ser #60/557,007, filed 3/26/04.

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Original Reports:

1. Knoll JHM. Frequency and replication pattern of fragile Xq28 in human heterozygotes from families with X-linked mental retardation. University of Saskatchewan, 1982.

2. Knoll JHM. Roberts Syndrome: Cytological and molecular investigations. University of Manitoba, 1987. (Ph.D. Thesis).

3. Chudley AE, Knoll JH, Gerrard JW, Shepel L, McGahey E, Anderson J. Fragile X-linked mental retardation I: Effect of age and intelligence on expression of the fragile X. Amer J Hum Genet 1983; 14:699-712.

4. Knoll JH, Chudley AE, Gerrard JW. Fragile X-linked mental retardation II: Frequency and replication

pattern of fragile Xq28 in heterozygotes. Amer J Hum Genet 1984; 36:640-645.

5. Chudley AE, Rozdilsky B, Houston CS, Becker LE, Knoll JH. Multicore disease in sibs with severe mental retardation, short stature, facial anomalies, hypoplasia of the pituitary fossa, and hypogonadatropic hypogonadism. Amer J Med Genet 1985; 20:145-158.

6. Hagerman RJ, Chudley AE, Knoll JH, Jackson AW, Kemper M, Ahmad R. Autism in fragile X females. Amer J Med Genet 1986; 23:375-380.

7. Heartlein MW, Knoll JHM, Latt SA. Chromosome instability associated with human alphoid DNA transfected into the Chinese hamster genome. Mol Cell Biol 1988; 8(9):3611-3618.

8. Knoll JHM, Nicholls RD, Magenis E, Graham JM Jr, Lalande M, Latt SA. Angelman and Prader-Willi syndromes share a common chromosome 15 deletion but differ in parental origin of the deletion. Amer J Med Genet 1989; 32(2):285-290.

9. Nicholls RD, Knoll JH, Glatt K, Hersh JH, Brewster TD, Graham JM Jr, Wurster-Hill D, Wharton R, Latt SA. Restriction fragment length polymorphisms within proximal 15q and their use in molecular cytogenetics and the Prader-Willi syndrome. Amer J Med Genet 1989; 33:66-77.

10. Knoll JHM, Nicholls RD, Lalande M. On the parental origin of chromosome 15q11q13 in Angelman Syndrome. Hum Genet 1989; 83:205-206.

11. Nicholls RD, Knoll JHM, Butler MG, Karam S, Lalande M. Genetic imprinting suggested by maternal heterodisomy in nondeletion Prader-Willi syndrome. Nature 1989; 342:281-285.

12. Knoll JHM, Nicholls RD, Magenis RE, Glatt K, Graham JM Jr, Kaplan L, Lalande M. Angelman Syndrome: Three molecular classes identified with chromosome 15q11q13 specific DNA markers. Amer J Hum Genet 1990; 47:149-155.

13. Bianchi DW, Flint AF, Pizzimenti MF, Knoll JHM, Latt SA. Isolation of fetal DNA from nucleated erythrocytes in maternal blood. Proc Nat Acad Sci 1990; 87(9):3279-3283.

14. Knoll JHM, Glatt K, Nicholls RD, Malcolm S, Lalande M. Chromosome 15 uniparental disomy is not frequent in Angelman Syndrome. Amer J Hum Genet 1991; 48:16-21.

15. Wagstaff J, Knoll JHM, Fleming J, Kirkness EF, Martin-Gallardo A, Greenberg F, Graham JM Jr, Menninger J, Ward D, Venter JC, Lalande M. Localization of the gene encoding the $GABA_A$ receptor B3 subunit to the Angelman/Prader-Willi region of human chromosome 15. Amer J Hum Genet 1991; 49:330-337.

16. Chaillet JR, Knoll JHM, Horsthemke B, Lalande M. The syntenic relationship between the critical deletion region for the Prader-Willi/Angelman syndromes and proximal mouse chromosome 7. Genomics 1991; 11:773-776.

17. Buiting K, Greger V, Horstmann I, Ludecke JJ, Senger G, Claussen U, Brownstein BH, Schlessinger D, Knoll JHM, Lalande M, Zabel B, Horsthemke B. Microdissection and molecular analysis of proximal 15q. In: Cassidy SB, ed. Prader-Willi syndrome and other chromosome 15q deletion disorders. Springer Verlag, Berlin. Series H: Cell Biology 1991; 61:13-17.

18. Beggs AH, Byers TJ, Knoll JHM, Boyce FM, Bruns G, Kunkel LM. Cloning and characterization of two human skeletal muscle alpha-actinin genes on chromosomes one and eleven. J Biol Chem 1992; 267:9281-9288.

19. Wagstaff J, Knoll JHM, Glatt KA, Shugart YY, Sommer A, Lalande M. Linkage of nondeletion Angelman syndrome to chromosome 1511-q13: Maternal but not paternal transmission leads to phenotypic expression. Nature Genetics 1992; 1:291-294.

20. Webb T, Clayton-Smith J, Cheng X-J, Knoll JHM, Lalande M, Pembrey ME, Malcolm S. Angelman syndrome with a chromosomal inversion 15 (p11q13) accompanied by a deletion in 15q11q13. J Med Genet 1992; 29:921-924.

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22. Knoll JHM, Sinnett D, Wagstaff J, Glatt K, Wilcox AS, Whiting P, Wingrove P, Sikela JM, Lalande M. FISH ordering of reference markers and of the gene for the α5 subunit of the gamma-aminobutyric acid receptor (GABRA5) within the Angelman and Prader-Willi syndrome chromosome regions. Hum Molec Genet 1993; 2:183-189.

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64. O'Sullivan, MJ, Swanson, PE, Knoll, J, Taboada, EM, Dehner, LP. Undifferentiated embryonal sarcoma with unusual features arising within mesenchymal hemartoma of the liver: Report of a case and review of the literature. Pediatr Dev Pathol. Sep-Oct 4(5): 482-489, 2001.

65. Yu N, Kruskall MS, Yunis JJ, Knoll JHM, Uhl, L, Alosco S, Ohashi M, Clavijo O, Husain Z, Yunis EJ, Yunis JJ, Yunis EJ. Disputed maternity leading to identification of tetragametic chimerism. New England J Med 346 (20): 1545-1552, 2002.

66. Knoll JHM, Rogan PK. Sequence-based, *in situ* detection of chromosomal abnormalities at high resolution, American Journal of Medical Genetics, 121A: 245-257, 2003.

67. Rogan PK, Knoll JHM. High resolution detection of chromosome abnormalities with single copy fluorescence in situ hybridization. IEEE Symposium on Biomedical Engineering, April, 2004.

68. Rogan PK, Knoll JHM: High Resolution Definition of Chromosome Abnormalities with Probes Designed from Genome Sequences, Discovery Medicine, 21(4): 99-101, 2004.

69. Tetsuya K, Shyu C, He L, Rogan PK, Knoll JHM. Content and classification based ranking algorithm for metaphase chromosome images. Proceedings of the IEEE International Conference, accepted for publication.

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71. Knoll JHM, Angell P, Walters P, Marsh C, Rogan P. Generation of high-specificity, single-copy probes proximate to human telomeres. Submitted 2004.

Reviews and educationally relevant publications:

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2. Lalande M, Wagstaff J, Knoll JHM. Molecular Analysis of the Angelman/Prader-Willi Syndromes. In: Adolph KW, ed. Genome Research in Molecular Medicine and Virology, New York, NY. Academic Press. 1993; pp 69-82.

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5. Knoll JHM. Prader-Willi Syndrome. In: Smith B, Adelman G, Eds. Neuroscience Year: Supplement 4 to the *Encyclopedia of Neuroscience.* Birkhauser, Boston, MA. 1996.

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2. JHM Knoll, H Baker, G Cox, ML Begleiter, LM Pasztor. Parental origin and replication timing studies in a 70, XXXX liveborn. Amer J Hum Genet 65(4):A167, 1999.

3. Kruskall MS, Uhl L, Yu N, Hussein S, Yunis E, Knoll J. Misinterpretation of HLA typing in a woman with congenital chimerism due to postzygotic fusion of two embryos. American Association of Blood Banking Meeting, November, 2000.

4. Knoll JHM, Cazcarro P, Rogan PK: Clinical application of sequence-based single copy probes for FISH, American Society of Human Genetics, October 2000.

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6. Rogan PK, Cazcarro P, Knoll JHM: Single copy hybridization probes for detection of chromosome rearrangements derived by genomic sequence analysis. American Association for Cancer Research, March 2001.

7. Rogan PK, Cazcarro P, Knoll JHM: Single copy hybridization probes for detection of chromosome rearrangements derived by genomic sequence analysis. 10th International Congress of Human Genetics (platform), May 2001.

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11. Knoll JHM, Angell P, Rogan PK: Detection of chromosomal rearrangements with single copy FISH probe arrays. American Society of Human Genetics, October 2002.

12. Knoll JHM, Rogan PK. Detection of Chromosomal Rearrangements with Single Copy FISH. 2nd Annual Kansas City Area Life Sciences Day, March 2003.

13. J.H.M. Knoll & P.K. Rogan. Detection of Chromosomal Rearrangements with Single Copy FISH. XIX International Congress of Genetics, July 2003.

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15. Knoll JHM, Marion AM, Fletjer W, Persons D, Cowan J, Rogan PK. Small upstream deletions of *ABL* 1 are rare in Chronic Myelogenous Leukemia. 2004 ASHG Annual Meeting, November, 2004.

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17. Yanala P., Lu T., El-Ghussein F., Zhao C., Medhi D., Wang Y-P., Knopp J., Knoll JHM., Rogan P. Automated detection of metaphase chromosomes in FISH and routine cytogenetics. 2004 ASHG Annual Meeting, November 2004.